TBK

TIETKE - BÜHLING - KINNE PARTNER (GbR)

VIA FAX AND MAIL (including 5 pages in total)

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PCT-Patent Application No.: PCT/IB02/02492
Nokia Corporation et al.
Our ref: WO 34762   (Frist: 16.06. Eing.)

Reference is made to the Written Opinion dated February 16,
2004.

Enclosed herewith new claims 1, 13 and 16 are filed, which
replace the respective original claims 1, 13 and 16.

These claims were amended based on the original disclosure
of page 7, lines 26 to 29.

The thus defined subject-matter is believed to define novel
as well as inventive subject-matter under the regulations
of the Patent Cooperation Treaty for the following reasons:

According to the present invention, a feature thereof
resides in the fact that the load balancing unit selects
any free processing unit on a per-packet basis, based on
the load state, so that a respective single processing unit
is not dedicated so serve a specific connection (or a
call).

Stated in other words, differences between different
sessions do not affect load balancing according to the
present invention.

Thus, the present invention achieves a solution in which a
respective processing unit handles packets of various
connections/calls/sessions.

The prior art cited in the present invention itself and
described with reference to Figure 3 selects a processing
unit on a per-connection basis. This means, that each
connection is associated to a dedicated processing unit
processing packets received for said connection.

Document D1, however, is based on the same principle.
Namely, according to document D1, load balancing is done
session-based. In this connection, it is referred to Figure
6 of document D1. Indeed, according to Figure 6, address
information is read from a packet header and thus, based on
this information, it is verified whether a connection table
entry exists or whether a new connection table entry for
such a connection being identifiable by such address
information from a packet header has to be created.

Hence, it has to be noted that each packet being identified
to belong to the same connection is handled in the same
manner. Therefore, the selection criteria according to
document D1 is not the packet as such but the
connection/session to which the packet belongs.

In contrast thereto, according to the present invention,
irrespective of a connection/session to which a packet
belongs, a respective packet is routed to an available
processing unit.

In consideration of the above basic difference between the cited prior art and the present, the claims have been amended to clearly point out this difference.

The prior art apparently does neither anticipate nor render obvious the claimed subject-matter.

The competent International Preliminary Examiner's reconsideration of the present case in the light of the above observations will thus lead to acknowledging the patentability of the claimed subject-matter in terms of novelty, inventive step as well as industrial applicability.

Hence, a positive International Preliminary Report on Patentability under chapter II PCT is respectfully requested to be issued as the appropriate next step of the proceedings.

Jürgen Faller
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Enclosure:
- New claims 1, 13 and 16

Enclosure of May 12, 2004

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New claims 1, 13 and 16

10   1. A method for balancing the load of resources in a packet
switched connection within a communication system, said
system comprising processing units (11; 12) for performing
communication, at least one load balancing unit (12; 22)
for distributing the load to said processing units (11;
15   12), and a data storage (14; 24), said method comprising
the steps of:
      obtaining a current connection state as well as a
current load state of said processing units from said data
storage (14; 24);
20   selecting by said load balancing unit (12; 22) a
processing unit on a per packet basis irrespective of a
specific connection to which a respective packet belongs;
      maintaining information about the load state of each
processing unit (11; 21) so that said selecting step is
25   performed by selecting a processing unit to serve and
process a respective packet based on the load state.

13. A device unit for serving and processing packets of a
communication connection, comprising:
30   means adapted to inform a load state of said device to
a balancing unit; and
      means adapted to obtain a state of said communication
connection,
      wherein said device unit is adapted to serve and
35   process packets of plural connections.

16. A device unit for balancing a load of each of multiple processing units performing a packet switched communication connection, comprising:

　　　means for maintaining a load state of each of said
5　processing units; and

　　　means adapted to select a processing unit on the basis of a respective load state on a per packet basis irrespective of a specific connection to which a respective packet belongs.

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